

Get your bearings: guidelines for newspaper based economic indicators



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This brief investigates the role that two key methodological choices play in the construction of textual indicators: the selection of local versus foreign newspapers and the breadth of the press coverage (i.e. the number of newspapers considered). The large literature in this field is almost silent about the robustness of research results to these two choices. The authors use as a case study the well-known economic policy uncertainty (EPU) index, taking as examples Latin America and Spain. They develop EPU measures based on press with different levels of proximity, i.e. local versus foreign, and corroborate that they deliver broadly similar narratives and impulse responses. Then, they show that constructing EPU indexes based on only one newspaper may yield biased responses. This suggests that it is important to maximize the breadth of press coverage when building text-based indicators, since this improves the credibility of results. In this regard, these findings are good news for researchers, given that they provide a justification for the combined use of a larger amount of data from local and foreign sources.

A broad and expanding literature in economics uses textual analysis to develop real-time measures of economic activity, policy uncertainty or social unrest. These measures are in turn confronted with economic and financial variables to show their relevance for economic and policy analysis and forecasting.

The literature typically focuses on one broad source of text: either the local press (for single-country studies) or the foreign-based press (for cross-country studies), with an interpretation of the results that abstracts from the type of data source. For instance, the well-known economic policy uncertainty (EPU) index pioneered by Baker et al. (2016) is based on local news. On the other hand, a very recent literature has constructed newspaper-based indicators using major international news sources (mostly leading Anglophone newspapers and networks).¹

There is no clear consensus on how many sources should be used to construct text-based indexes or which type of press should be considered. Furthermore: the literature has developed many newspaper based economic indicators with no guidance on this matter, with the authors following their own feelings about it. Andres-Escayola et al. (2022) has tried to put some order on this issue by answering to the following questions: (i) Do sources with different levels of proximity convey different information?; (ii) Is it better to use a broad coverage or is it sufficient to rely on only one source? These questions are relevant since newspaper repositories are usually not free of charge and the production of newspaper-based economic indicators is growing fast. The answers to these questions provide some guidance for the construction of these types of indexes.

In their application, the authors focus on the well-known and broadly used EPU indicator by Baker et al. (2016) for a number of countries, and construct this indicator for each country on the basis of, alternatively, local and foreign newspapers.² They then compare the narratives emerging from these indexes and examine their macroeconomic effects using a structural Bayesian vector autoregression (BVAR) framework.

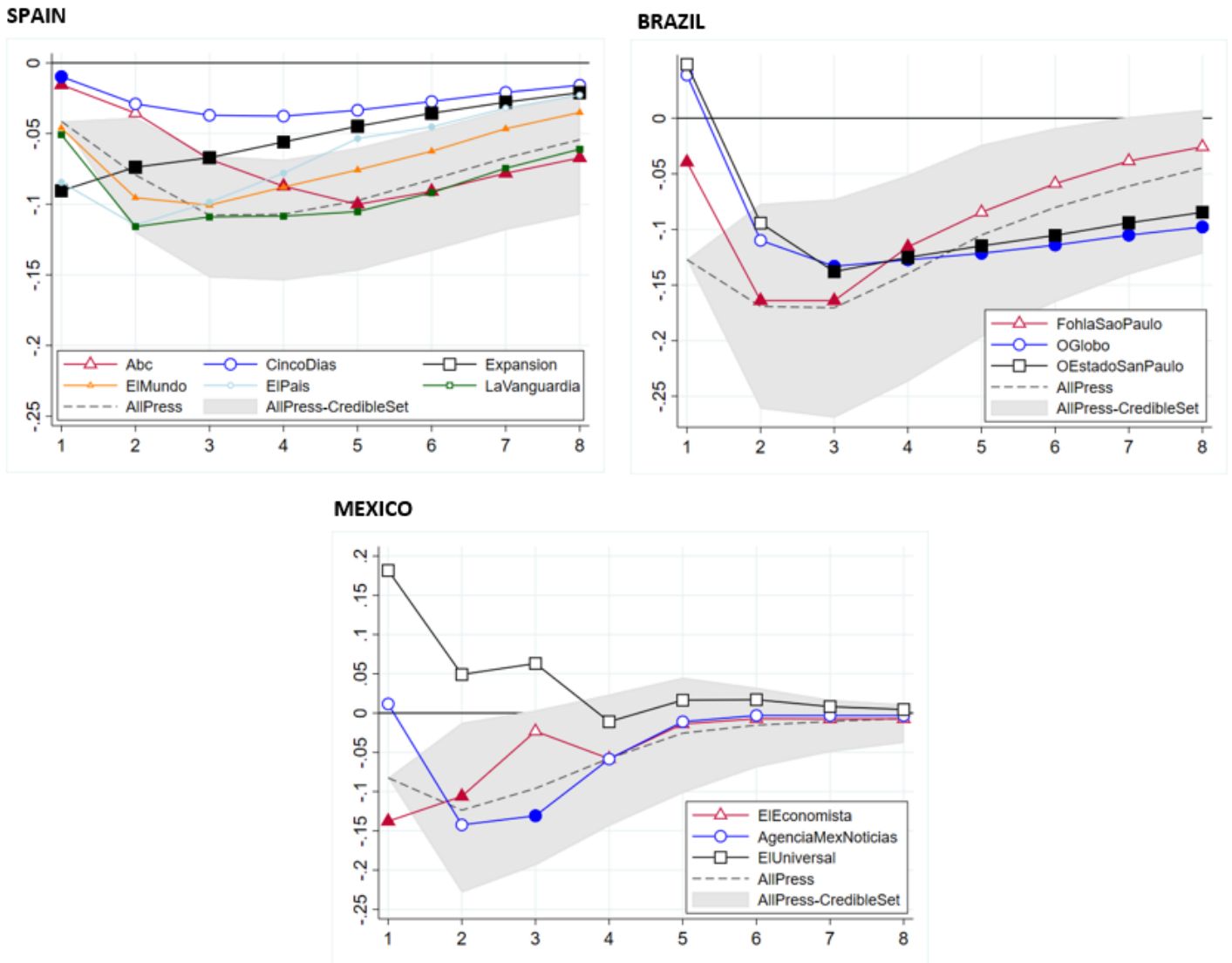
One possible hypothesis is that news with different levels of proximity convey different messages to the readers and this might affect newspaper-based indicators. However, they show quite the opposite. Although EPU indexes based on local and foreign news show obvious differences, they reflect the same narrative overall and deliver extremely similar macroeconomic impulse responses. This finding should reassure researchers that they can also rely on foreign sources to construct EPU indexes. This option may foster the comparability of results across countries and lay the groundwork for cross-country studies of uncertainty.

To answer the second research question, the authors show that it is often the case that macroeconomic responses to EPU indexes based on only one newspaper lie outside the credible bands of responses to the EPU index based on all sources available. Figure 1 provides some examples for the case of Spain, Mexico and Brazil. This suggests that EPU indexes based on one single newspaper may provide biased results and that it is best to rely on multiple sources when constructing these indexes. Based on this evidence, the authors advocate maximizing the breadth of the press coverage when constructing newspaper-based indicators. That is, the larger the press coverage, the better.

¹ Examples include the political violence index of Mueller and Rauh (2018), the geopolitical risk index (Caldara and Iacoviello, 2022), the World Uncertainty Index (Ahir et al., 2019) and the Reported Social Unrest Index (Barrett et al., 2020).

² When considering foreign sources, they select the major international newspapers produced in the US, the UK and Canada, since the Anglophone press is the most standard international source used in the literature.

Figure 1: Robustness results regarding the breadth of press coverage: IRFs of GDP to EPU shocks (percentage points)



Note: Each panel depicts the median impulse responses (IRF) of GDP to a rise of one standard deviation in the EPU index in Spain, Brazil and Mexico, respectively. In each panel, the dashed grey line depicts the median IRF of GDP to shocks in the EPU constructed based on all available press (pooling together local and foreign sources) and the grey area depicts its corresponding 84%-16% credible set. For Spain, we consider a set of Anglophone newspapers as foreign sources. For Mexico and Brazil, foreign sources are represented by both Anglophone and Spanish newspapers. All other lines represent the IRFs of GDP to shocks in the EPU index constructed considering only one local newspaper at a time. Filled symbols indicate statistical significance within the 84%-16% credible set, while empty symbols represent not-significant estimates. The horizontal axis measures quarters since the shock.

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